PUBLIC VERSION OF DOCUMENT FILED UNDER SEAL

IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

RAVGEN, INC., Plaintiff, v. LABORATORY CORPORATION OF AMERICA HOLDINGS, Defendant.	Civil Action No. 6:20-CV-00969-ADA JURY TRIAL DEMANDED ~~**FILED UNDER SEAL**~~ ~~**RESTRICTED – OUTSIDE ATTORNEYS' EYES ONLY**~~

DEFENDANT LABORATORY CORPORATION OF AMERICA HOLDINGS' MOTION FOR SUMMARY JUDGMENT OF INVALIDITY UNDER INDEFINITENESS, OR IN THE ALTERNATIVE, NON-INFRINGEMENT

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES **PAGE(S)**

STATUTES

RULES

I. INTRODUCTION

Defendant Laboratory Corporation of America Holdings ("Labcorp") moves for summary judgment of invalidity under indefiniteness, or in the alternative, no infringement, of the Asserted Claims of U.S. Patent Nos. 7,332,277 ("the '277 Patent") and 7,727,720 ("the '720 Patent") (collectively, "the Asserted Patents").

Invalidity Due to Indefiniteness. The term "cell lysis inhibitor," found in all of the Asserted Claims, is indefinite. This Court issued a supplemental claim construction order in *Ravgen, Inc. v. Natera, Inc.* construing the "agent" term found in all of the Asserted Claims to mean:

> a substance that inhibits the rupture of cells that is selected from the group consisting of membrane stabilizer, cross-linker and cell lysis inhibitor, and does not include chelators used as anticoagulants nor endogenous substances.

No. 1:20-cv-00692-ADA, Dkt. 176 (W.D. Tex. Nov. 8, 2021) ("*Natera* Supplemental Claim Construction Order"). In this order, the "Court agree[d] with Natera that the last category of the Markush group—cell lysis inhibitor—is a catchall category that broadly covers both direct and indirect cell lysis inhibitors." *Id.* at 10. The Court further noted that "Ravgen does not identify any common characteristic or structures from the listed examples from which a bonded group could be discerned." *Id.* Indeed, the claims, specifications, and file histories of the Asserted Patents fail to provide sufficient guidance to a person of ordinary skill in the art ("POSITA") as to what falls within the bounds of the term "cell lysis inhibitor." To avoid the indefiniteness problem, Plaintiff Ravgen, Inc. ("Ravgen") attempts to equate the term to a "fixative" or "cross-linker." But this is an improper last-minute deviation from Ravgen's previous position that the term should receive its plain and ordinary meaning. Consequently, the Court should grant Labcorp's motion for summary judgment of invalidity because the term "cell lysis inhibitor" is indefinite.

In the Alternative, No Infringement. If the Court adopts Ravgen's proposition that a "cell lysis inhibitor" is a "fixative" or "cross-linker," Labcorp moves for summary judgment of no infringement. Ravgen failed to and cannot prove that the limitation of a closed Markush group in all Asserted Claims is met, which requires "an agent that inhibits [or impedes] lysis of cells . . . wherein said agent is ***selected from the group consisting of membrane stabilizer, cross-linker, and cell lysis inhibitor***." [redacted] Accordingly, Labcorp's motion for summary judgment of no infringement should be granted.

II. FACTUAL BACKGROUND

A. The Asserted Patents

Ravgen asserts claims 67, 91, 130 and 132 of the '277 Patent and claim 6 of the '720 Patent (collectively, the "Asserted Claims") against Labcorp. *See* Ex. [1] C, 06/22/22 email.

Claims 67, 130, and 132 of the '277 Patent all ultimately depend on independent claim 55, which requires the following "agent" limitation:

> wherein said sample comprises . . . ***an agent that inhibits lysis of cells*** . . . wherein said agent is selected from ***the group consisting of membrane stabilizer, cross-linker, and cell lysis inhibitor***.

[1] All exhibits are attached to the Declaration of Olivia M. Kim submitted in support of Labcorp's summary judgment and *Daubert* motions filed concurrently herewith.

Ex. A, '277 Patent at 473:1-5.[2]

Claim 91 of the '277 Patent ultimately depends on independent claim 81, which also requires the following "agent" limitation:

> wherein said sample comprises ***an agent that inhibits lysis of cells*** . . . wherein said agent is selected from ***the group consisting of membrane stabilizer, cross-linker, and cell lysis inhibitor.***

Id. at 474:54-57.

Similarly, claim 6 of the '720 Patent ultimately depends on independent claim 1, which requires the following "agent" limitation:

> wherein said sample comprises ***an agent that impedes cell lysis*** . . . wherein said agent is selected from ***the group consisting of membrane stabilizer, cross-linker, and cell lysis inhibitor.***

Ex. B, '720 Patent at 535:17-20.

As shown above, all of the Asserted Claims require the "agent" limitation with the closed Markush group "consisting of [A] membrane stabilizer, [B] cross-linker, and [C] cell lysis inhibitor."

B. The Accused Streck Tubes

Ravgen alleges that Labcorp's use of the third-party Streck's Cell-Free DNA BCT Blood Collection Tubes ("the Streck Tubes") with the MaterniT21 PLUS test, the MaterniT Genome test, the informaSeq test, and the Resolution ctDx Lung Assay (collectively, the "Accused Tests") infringes the Asserted Claims. *See, e.g.*, Ex. D, Prestwich Opening Report ¶ 1-3. Ravgen's infringement allegations hinge on Labcorp's use of the Streck Tubes to collect samples for the Accused Tests to meet the "agent" limitation identified above. *See id.*

[2] Unless stated otherwise, all emphasis in quotes is added.

[redacted]

III. LEGAL STANDARD FOR SUMMARY JUDGMENT

Summary judgment is appropriate where the moving party demonstrates there are no genuine issues of material fact and the moving party is entitled to judgment as a matter of law. FED. R. CIV. P. 56(a); *Celotex Corp. v. Catrett*, 477 U.S. 317, 325 (1986). "Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment"—and only if those disputes are '"genuine,' that is, if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). Moreover, the nonmoving party cannot defeat summary judgment merely by demonstrating "that there is some metaphysical doubt as to the material facts." *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986).

IV. THE ASSERTED CLAIMS ARE INVALID BECAUSE THE TERM "CELL LYSIS INHIBITOR" IS INDEFINITE

The term "cell lysis inhibitor" found in all of the Asserted Claims is indefinite because the claims, specifications, and file histories of the Asserted Patents do not provide sufficient guidance to a POSITA as to what constitutes a "cell lysis inhibitor." To avoid indefiniteness, Ravgen attempts to narrow the term and equate it to a "fixative" or "cross-linker." But this last-minute

change is improper. Ravgen has already admitted that that term should be construed as to its plain and ordinary meaning.[3] And it only now attempts to narrow the claim after essentially admitting that under its plain and ordinary construction, the term has no bounds. Accordingly, the Asserted Claims should be found invalid as indefinite.

A. Legal Standard For Invalidity Under Indefiniteness

"[I]ndefinteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012). Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. *See* 35 U.S.C. § 112, ¶ 2. "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application was filed. *See id*. at 911. Indefiniteness must be proven by clear and convincing evidence. *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

B. The Intrinsic Evidence Fails to Teach What Constitutes a "Cell Lysis Inhibitor"

The term "cell lysis inhibitor" does not have a known meaning within the art, and Ravgen does not argue that it does.[4] The claims, specifications, and prosecution histories of the Asserted

[3] *See, e.g.*, Dkt. 54 (Joint Claim Construction Statement) at 3-4 (Ravgen proposing the "agent" phrase, which includes the term "cell lysis inhibitor," as "Plain and ordinary meaning").

[4] Instead, Ravgen tries to tie "cell lysis inhibitor" to a well-known term in the art—"fixative"—because [redacted] Ex. G, Van Ness Rebuttal Report at ¶ 1827. This is improper claim construction and will be addressed in § IV.C, *infra*.

Patents fail to provide sufficient guidance as to what constitutes a "cell lysis inhibitor."

1. The Claims Do Not Provide Guidance as to the Scope of "Cell Lysis Inhibitor"

The claims of the Asserted Patents fail to provide any guidance as to the scope of the term "cell lysis inhibitor." Ravgen's expert, Dr. Brian Van Ness, argues that:

[redacted]

Ex. G, Van Ness Rebuttal Report at ¶ 1824. But Dr. Van Ness does not identify which claims or what language in the claim indicates that [redacted] *Id.* In fact, there is no mention of the phrase "structural integrity" in any of the claims of either the '277 or '720 Patent.

In the '277 Patent, the term "cell lysis inhibitor" is used in claims 8, 9, 10, 55, 59, 60, 81, 89, 90, 91, 112, 113, 114, 125, 132, 133, and 138. Ex. A, '277 Patent at 469:47-57; 472:66-473:5; 473:13-18; 474:52-57; 475:13-20; 476:54-65; 477:33-35; 478:12-17; 478:30-31. The majority of these claims merely recite the term as a member of the Markush group of the "agent" term or claim that "said agent is a cell lysis inhibitor," neither of which provide any clarity as to what constitutes a "cell lysis inhibitor." *See id.* at 469:47-57; 472:66-473:5; 473:13-14; 74:52-57; 475:13-18; 476:54-60; 478:29-30. Dependent claims 10, 60 and 90 state that the "cell lysis inhibitor is selected from the group consisting of glutaraldehyde, derivatives of glutaraldehyde, formaldehyde, formalin, and derivatives of formaldehyde." *Id.* at 469:54-57; 473:15-18: 475:15-18. Similarly, the remaining dependent claims (claims 125, 132, and 133) identify the "cell lysis inhibitor" to be subset of glutaraldehyde, formaldehyde, and formalin. *Id.* at 475:19-20; 476:61-65; 477:33-35; 478: 12-17; 478. Thus, the only possible guidance that the claims of the '277 Patent provide for

the "cell lysis inhibitor" term is that it ***could*** be glutaraldehyde, derivatives of glutaraldehyde, formaldehyde, formalin, and derivatives of formaldehyde. This does not provide any sufficient guidance as to the ***full*** scope of the term "cell lysis inhibitor."

The claims of the '720 Patent also do not provide any guidance. They only mention "cell lysis inhibitor" in the "agent" Markush group of claim 1, which gives no insight as to what a "cell lysis inhibitor" is. Ex. B, '720 Patent at 535: 15-21. Accordingly, the claims of the Asserted Patents fail to inform, with reasonable certainty, the POSITA about the scope of the invention.

2. The Specifications Do Not Provide Clarity As to the Scope of "Cell Lysis Inhibitor"

The specifications of the Asserted Patents also fail to provide clarity into the scope of the term "cell lysis inhibitor." Ravgen's experts argue that [redacted] Ex. G, Van Ness Rebuttal Report at ¶ 1826 (citing '277 Patent at 31:57-32:3 and '720 Patent at 31:43-54); *see also* Ex. H, Prestwich Rebuttal Report at ¶ 145 (citing same).

But, at best, the cited portion of the specifications lists some exemplary "cell lysis inhibitors," but that exemplary list is preceded by the phrase "***including but not limited to***," thereby undermining the guidance provided by the exemplary list. *See* Ex. A, '277 Patent at 10:17-21, 15:39-51, 30:33-44; 31:57-32:3; Ex. B, '720 Patent at 6:32-44, 11:43-56. In the *Natera* Supplemental Claim Construction Order, this Court ***rejected*** Ravgen's argument that "cell lysis inhibitor" is a well-defined group because of the "including but not limited to" language cited above. *Natera, Inc.,* No. 1:20-cv-00692-ADA, Dkt. 176 at 10 ("Ravgen argues 'cell lysis inhibitors' is a well-defined group, but the only intrinsic evidence cited in support is a long list of cell lysis inhibitors prefaced by the 'including but not limited to.'"). In fact, the Court even noted that "Ravgen does not identify any common characteristics or structures from the listed examples

from which a bounded group could be discerned." *Id.* The same holds true here. Ravgen's experts do not (and cannot) point to any other language in the specification other than the exemplary list of "cell lysis inhibitors" that is subject to an "including but not limited to" qualifier as support for their opinions that a "cell lysis inhibitor" is a "chemical structure that preserves the structural integrity of cells." *See* Ex. G, Van Ness Rebuttal Report at ¶ 1824.

Other recitations of the term "cell lysis inhibitor" in the specifications also do not give further clarity as to the scope of the term. Most of the recitations of "cell lysis inhibitor" in the specifications merely recite the term as a part of the Markush group in a general description of the invention. *See* Ex. A, '277 Patent at 15:22-30 (describing "isolating nucleic acid"), 15:30-35 (describing "isolating free fetal nucleic acid" but including steps regarding centrifugation), 26:16-24 (describing "determining the sequence of a locus of interest on fetal DNA"), 26:30-34, 26:35-39 (describing "isolating free DNA"), 26:40-57 (describing nucleic acid isolation kits but failing to describe any connection to the scope of "cell lysis inhibitor"), 26:58-64 (describing "isolating free fetal DNA" and "isolating the DNA" from a pregnant female); Ex. B, '720 Patent at 6:7-15, 10:22-64, 11:9-25, 20:62-21:3, 21:4-21 (describing "isolating DNA" where the sample is from "bacteria, viruses, fungi, mycobacteria, protozoa, molds, yeasts, plants, humans, non-humans, multi-cellular parasites, animals, and archaebacteria"), 21:22-36 (describing "detecting nucleic acid" and "isolating nucleic acid"), 21:37-54, 22:42-23:8 (describing "detecting nucleic acid containing at least one mutation" and "isolating nucleic acid"), 27:47-28:14. Other mentions of "cell lysis inhibitor" in the specification indicate that it can be used alone, or in combination with the other two listed alternatives of the Markush group. Ex. A, '277 Patent at 30:23-60; Ex. B, '720 Patent at 31:65-32:3. These recitations of the term provide no guidance as to what constitutes a "cell lysis inhibitor."

Lastly, the specifications merely provide general information as to (1) the effect of the "cell lysis inhibitor," which is simply to inhibit cell lysis;[5] and (2) when and how long the "cell lysis inhibitor" should be added to the sample.[6] These general statements fail to provide a well-defined group of substances that fall within the boundaries of the term "cell lysis inhibitor." Accordingly, the specifications of the Asserted Patents fail to inform, with reasonable certainty, the POSITA about the scope of the invention.

3. The Prosecution Histories Do Not Give Further Insight as to the Scope of "Cell Lysis Inhibitor"

The prosecution histories of the Asserted Patents similarly fail to provide the requisite guidance. Ravgen's experts argue that the prosecution histories [redacted] Ex. G, Van Ness Rebuttal Report at ¶ 1831 (citing '277 Patent file history at (1) 01/30/07 Office Action at RAVGEN-00012894, (2) 07/14/06 Amendment at RAVGEN-00012671, and (3) 05/30/07 Amendment at RAVGEN-00013025-029; '720 Patent file history at 12/17/07 Amendment at RAVGEN-00015534-538 (noting that the patentee proffers similar arguments to 05/30/07 Amendment of the '277 Patent file history)); *see also* Ex. H, Prestwich Rebuttal Report at ¶ 148 (citing the same). But the cited portions do not indicate that a "cell lysis

[5] *See* Ex. A, '277 Patent at 30:61-67 ("In another embodiment, the cell lysis inhibitor is added to the sample such that lysis is less than about 10% of the cells. In a preferred embodiment, the cell lysis inhibitor is added to the sample such that lysis is less than about 5% of the cells. In a most preferred embodiment, the cell lysis inhibitor is added to the sample such that lysis is less than 1% of the cells."); *see also* Ex. B, '720 Patent at 32:4-9.

[6] *See* Ex. A, '277 Patent at 31:14-20 ("[T]he cell lysis inhibitor . . . is added to the sample in an applicable time period including but not limited to 1-10 seconds, 10-30 seconds, 30-60 seconds, 1-5 minutes, 5-10 minutes, 10-20 minutes, 20-30 minutes, 30-40 minutes, 40-50 minutes, 60-90 minutes, 90-180 minutes ***or greater than 180 minutes after collection of the sample***."), 31:26-31 ("[A]fter the addition of the cell lysis inhibitor, membrane stabilizer, or cross-linker, the sample is left at about room temperature for the period of time to allow the reagent to function, including but not limited to 1-5, 5-10, 10-20, 20-40, 40-60, 60-90, 90-120, 120-150, 150-180, 180-240, 240-300 ***or greater than 300 minutes***"); *see also* Ex. B, '720 Patent at 32:24-29, 32:35-40.

inhibitor" must be a fixative; rather, they merely indicate that formaldehyde and glutaraldehyde are known in the art as fixatives.

First, in the January 30, 2007 Office Action from the '277 Patent file history, the Examiner rejected the pending dependent claim 189—where the cell lysis inhibitor is "selected from a defined group which includes glutaraldehyde, formaldehyde and formalin"—because prior art Kiessling taught those limitations. Ex. I, RAVGEN-00012894; *see also* Ex. G, Van Ness Rebuttal at ¶ 1831; Ex. H, Prestwich Rebuttal at ¶ 148. While Kiessling does state that "the term 'fixative' refers to an agent that is capable of preserving the structure of a biological molecule," the Examiner emphasized the fact that formaldehyde and glutaraldehyde are examples of "well-known fixatives." Ex. I, RAVGEN-00012894. This does not support Ravgen's contention that all "cell lysis inhibitors" must be fixatives.

Second, the July 14, 2006 Amendment from the '277 Patent file history shows that the prior art Schueler reference refers to formalin as a fixative that could be an "agent that inhibits cell lysis." *See* Ex. J, RAVGEN-00012671 ("the teachings of Schueler et al. that ***fixatives [sic] like formalin*** may be used in the preservation of intact fetal cells in no way would have suggested to one of ordinary skill in the art that the ***addition of an agent that inhibits cell lysis*** to samples would have provided any advantage in methods of isolating free fetial [sic] DNA"); Ex. G, Van Ness Rebuttal at ¶ 1831; Ex. H, Prestwich Rebuttal at ¶ 148. Here, again, there is no limiting of all "cell lysis inhibitor" to a "fixative."

Third, Ravgen's experts cite to the May 30, 2007 Amendment from the '277 Patent file history to argue that the patentee argued "[o]ne of ordinary skill in the art would not be motivated to combine the teachings of Kiessling [including contacting a biological sample with a fixative] with Umansky as the DNA analyzed in the two methods is quite distinct (*i.e.,* DNA in Umansky

et al. is free and circulating outside of a cell, while the DNA analyzed in Kiessling is in and/or is released from a fixed cell)."[7] Ex. G, Van Ness Rebuttal at ¶ 1831; Ex. H, Prestwich Rebuttal at ¶ 148; *see also* Ex. K, RAVGEN-00013027. But the cited portion does not show that "cell lysis inhibitor" and "fixative" are synonyms. Rather, Ravgen relied on the teachings of Kiessling to show that formalin is known in the art as a fixative, as discussed above. Ravgen further stated in the May 30, 2007 Amendment: "The high percentage of fetal DNA versus maternal DNA, which can be obtained from the plasma of maternal blood to which ***cell lysis inhibitor (e.g., formalin)*** has been added is further demonstrated in Example 15 of Applicant's specification." Ex. K, RAVGEN-00013027. This again fails to provide any notice to a POSITA that "cell lysis inhibitor" is limited only to a "fixative."

In sum, none of the cited portions to the prosecution histories proffered by Ravgen's experts show that the term "cell lysis inhibitor" is synonymous with "fixative." At best, they show that formaldehyde, glutaraldehyde, or formalin are known in the art as fixatives, and thus, the "cell lysis inhibitor" can be a fixative only if one of those are chosen. Accordingly, the claims, specifications, and prosecution histories of the Asserted Patents fail to provide sufficient guidance to a POSITA as to what falls into the bounds of a "cell lysis inhibitor," thereby rendering the term indefinite.

[7] Ravgen's experts also cite to the December 17, 2007 Amendment from the '720 Patent file history (Ex. L, RAVGEN-00015534-538), contending that it proffers a similar argument, only substituting Umansky with Anker. *See* Ex. G, Van Ness Rebuttal at ¶ 1831; Ex. H, Prestwich Rebuttal at ¶ 148.

C. Ravgen's Attempt to Define "Cell Lysis Inhibitor" as a Fixative is Improper Claim Construction

Ravgen attempts to define the term "cell lysis inhibitor" as "fixative" that "cross-links" to avoid the indefiniteness problem. But this is improper claim construction because: (1) "cell lysis inhibitor" has a plain and ordinary meaning of an agent that inhibits cell lysis; and (2) the intrinsic evidence fails to specifically define "cell lysis inhibitor" as a fixative.

First, the term "cell lysis inhibitor," as plainly read in context of the claims and intrinsic evidence, means an agent that inhibits cell lysis. It does not have any known or special meaning to a POSITA. *See* Ex. M, Dumont Opening Report at ¶ 691; *see also Thorner v. Sony Comput. Entm't. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) ("The words of a claim are generally given their ordinary and custom meaning as understood by a person of skill in the art when read in the context of the specification and prosecution history.").

Second, the intrinsic evidence fails to specifically define "cell lysis inhibitor." *Thorner*, 669 F.3d at 1365 ("To act as its own lexicographer, a patentee must 'clearly set forth a definition of the disputed claim term' other than its plain and ordinary meaning."). Ravgen's expert, Dr. Van Ness, opines that [redacted] Ex. G, Van Ness Rebuttal at ¶¶ 1828-29. This logic is flawed.

As a threshold matter, there is no mention of the term "fixative" in any of the 280 pages of the '277 Patent or in any of the 310 pages of the '720 Patent. Neither the claims nor the specifications of the Asserted Patents contemplate equating the term "cell lysis inhibitor" with the

"fixative" term as Ravgen proposes. Ravgen and Dr. Van Ness instead rely on language in the prosecution histories to indicate that formaldehyde and glutaraldehyde were known as fixatives. *See, e.g.*, Ex. G, Van Ness Rebuttal Report at ¶ 1835 (citing 01/30/07 Office Action from '277 Patent file history at RAVGEN-00012894). While formaldehyde and glutaraldehyde are known as fixatives,[8] this only merely shows that a "cell lysis inhibitor" can be a fixative, not that ***all*** species of "cell lysis inhibitor" must be a fixative. *See* § IV.B, *supra*. Indeed, as discussed above, when the specifications list exemplary "cell lysis inhibitors," the list is preceded by the phrase "***including but not limited to.***" *See* Ex. A, '277 Patent at 10:17-21, 15:39-51, 30:33-44; 31:57-32:3; Ex. B, '720 Patent at 6:32-44, 11:43-56. And this Court ***rejected*** Ravgen's argument that "cell lysis inhibitor" is a well-defined group because of the "including but not limited to" language cited above. *Natera, Inc.,* No. 1:20-cv-00692-ADA, Dkt. 176 at 10.

Ravgen and its experts also argue that the Asserted Patents [redacted] Ex. G, Van Ness Rebuttal Report at 1833 (citing '277 Patent at 91:47-49); *see also* Ex. H, Prestwich Rebuttal at ¶ 147 n. 62 (citing same). However, the cited portion of the '277 Patent recites "formaldehyde was used to prevent lysis of the cells, however, ***any*** agent that prevents the lysis of the cells ***or*** increase the structural integrity of the cells can be used." Ex. A, '277 Patent at 91:47-49. Again, the specifications merely identify formaldehyde as one example of an agent that prevents the lysis of the cells. They do not limit in any way the scope of or specifically define the term "cell lysis

[8] According to Ravgen's experts, formaldehyde and glutaraldehyde are not only fixatives, but also a "cross-linker" and a "membrane stabilizer," also terms used in the Asserted Claims. *See, e.g.*, Ex. H, Prestwich Rebuttal Report at ¶ 141; Ex. G, Van Ness Rebuttal Report at ¶ 1835.

inhibitor."

Accordingly, Ravgen's attempt to avoid indefiniteness by improperly narrowing the term "cell lysis inhibitor" to a "fixative" or "cross-linker" should be rejected. Because the term "cell lysis inhibitor" found in all of the Asserted Claims is indefinite, the Asserted Claims should be found invalid.

V. IN THE ALTERNATIVE, THERE IS NO INFRINGEMENT

If and to the extent that the term "cell lysis inhibitor" is not found to be indefinite and is defined as a "fixative" or "cross-linker," Ravgen failed to and cannot prove that the closed Markush group limitations required by independent claims 55 and 81 of the '277 Patent and independent claim 1 of the '720 Patent—"an agent that inhibits [or impedes] lysis of cells . . . wherein said agent is selected from the group consisting of membrane stabilizer, cross-linker, and cell lysis inhibitor"—are met by the accused Streck Tubes. [redacted] Because the independent claims that the Asserted Claims depend on cannot be infringed, the Accused Tests cannot infringe the Asserted Claims as a matter of law.

A. Legal Standard For Infringement and Markush Group

The patentee bears the burden of proving infringement by a preponderance of evidence. *See Star Sci., Inc. v. R.J. Reynolds Tobacco Co.,* 655 F.3d 1364, 1378 (Fed. Cir. 2011). "To establish literal infringement, every limitation set forth in a claim must be found in an accused product, exactly." *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed. Cir. 1995); *see also V-Formation, Inc. v. Benetton Grp. SpA*, 401 F.3d 1307, 1312 (Fed. Cir. 2005) ("Literal

infringement requires that each and every limitation set forth in a claim appear in an accused product."). Further, an accused product that does not infringe an independent claim also, necessarily, does not infringe any claim that depends on that independent claim. *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1553 (Fed. Cir. 1989).

"A Markush group lists specified alternatives in a patent claim, typically in the form: a member selected from the group consisting of A, B, and C." *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1372 (Fed. Cir. 2005). "[I]f a patent claim recites 'a member selected from the group consisting of A, B, and C,' the 'member' is presumed to be ***closed*** to alternative ingredients D, E, and F." *Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1358 (Fed. Cir. 2016). "Use of the transitional phrase 'consisting of' to set off a patent claim element creates a very strong presumption that that claim element is 'closed' and therefore 'exclude[s] any elements, steps, or ingredients not specified in the claim." *Id.* (citing *AFG Indus., Inc. v. Cardinal IG Co.,* 239 F.3d 1239, 1245 (Fed. Cir. 2001)). When an accused product contains a component that functionally and structurally relates to the invention, but is an unlisted alternative to the Markush group, the accused product does not infringe the Markush group claim limitation. *See Shire Dev., LLC v. Watson Pharm., Inc.*, 848 F.3d 981 (Fed. Cir. 2017) (finding that the inclusion of lipophilic magnesium stearate in the hydrophilic outer matrix (as required by the Markush group claim limitation) rendered the accused product non-infringing because magnesium stearate was an unlisted alternative); *see also Abbott Labs. v. Baxter Pharm. Prods., Inc.*, 334 F.3d 1274, 1281 (Fed. Cir. 2003) (noting that by adding a Markush group reciting specific Lewis acid inhibitors, patentee "disclaimed any coverage for Lewis acid inhibitors other than the six listed members of the Markush groups in issued claims 1 and 6."); *Forta Corp. v. Surface-Tech, LLC*, No. 2:13-cv-01608, 2015 WL 3756180, at *16 (W.D. Pa. Apr. 1, 2015) ("the

inclusion of any polyolefins that are not listed in the *Markush* group would be improper as a matter of law.") (adopted by *Forta Corp. v. Surface-Tech, LLC*, No. 2:13-cv-01608, 2015 WL 3756187, at *10 (W.D. Pa. June 11, 2015)).

B. [redacted]

Ravgen's infringement allegations hinges on the Streck Tubes meeting the following "agent" claim limitation in the Asserted Claims:

> wherein a sample comprises . . . ***an agent that inhibits [or impedes] lysis of cells***, if cells are present, wherein ***said agent is selected from the group consisting of membrane stabilizer, cross-linker, and cell lysis inhibitor***.

Ex. A, '277 Patent at Claims 55 and 81; *see also* Ex. B, '720 Patent at Claim 1.

The Asserted Claims require an "agent that inhibits [or impedes] cell lysis," wherein the agent is subject to a closed Markush group consisting of "membrane stabilizer, cross-linker, and cell lysis inhibitor." *See Multilayer*, 831 F.3d at 1358. ("Use of the transitional phrase 'consisting of' to set off a patent claim element creates a very strong presumption that that claim element is 'closed' and therefore 'exclude[s] any elements, steps, or ingredients not specified in the claim.") (citations omitted). There is no language in the patent or prosecution history that overcomes the strong presumption that this "agent" Markush group is closed. Thus, under the law, the claimed "agent that inhibit [or impedes] cell lysis" must comprise of either a membrane stabilizer, cross-linker, or cell lysis inhibitor, and cannot comprise of any unlisted alternatives to the Markush group.

[redacted] Accordingly, the closed Markush group of the "agent" limitation required in all of the Asserted Claims cannot be met as a matter of law.

1. [redacted]

2. [redacted]

[redacted]

As discussed above in § IV.C, Ravgen's experts opine that "cell lysis inhibitor" has cross-linking characteristics. *See* Ex. H, Prestwich Rebuttal at ¶ 141. [redacted] Consequently, the Streck Tubes do not, and cannot, infringe the Asserted Claims as the matter of law as they contain an unlisted alternative. *See Multilayer,* 831 F.3d at 1360-61; *Shire*, 848 F.3d at 981.

C. [redacted]

[redacted]

[redacted]

[9] [redacted] But this failure is not subject of this Motion.

[redacted] *See Multilayer*, 831 F.3d at 1358 ("[I]f a patent claim recites 'a member selected from the group consisting of A, B, and C,' the 'member' is presumed to be ***closed*** to alternative ingredients D, E, and F."); *see also Shire*, 848 F.3d 981 (finding the accused product non-infringing because the inclusion of lipophilic magnesium stearate in the hydrophilic outer matrix (as required by the Markush group claim limitation) violated the Markush group).

VI. CONCLUSION

For the foregoing reasons, the Asserted Claims should be found invalid under indefiniteness because the term "cell lysis inhibitor" is indefinite. In the alternative, there is no infringement of the Asserted Claims because Ravgen failed to and cannot prove that the "agent" limitation of a closed Markush group is met.

Dated: June 30, 2022

Respectfully submitted,

By: */s/ Olivia M. Kim*

Aden M. Allen
Texas Bar No. 24064808
WILSON SONSINI GOODRICH & ROSATI
Professional Corporation
900 South Capital of Texas Highway
Las Cimas IV, Fifth Floor
Austin, Texas 78746-5546
Telephone: 512-338-5400
Facsimile: 512-338-5499
aallen@wsgr.com

Edward G. Poplawski
Admitted *pro hac vice*
Olivia M. Kim
Admitted *pro hac vice*
Erik J. Carlson
Admitted *pro hac vice*
Naoya Son
Admitted *pro hac vice*
WILSON SONSINI GOODRICH & ROSATI
Professional Corporation
633 West Fifth Street, Suite 1550
Los Angeles, CA 90071
Telephone: (323) 210-2900
Facsimile: (866) 974-7329
epoplawski@wsgr.com
okim@wsgr.com
ecarlson@wsgr.com
nson@wsgr.com

Matias Ferrario
Admitted *pro hac vice*
Nicole L. Regna
Admitted *pro hac vice*
KILPATRICK TOWNSEND & STOCKTON LLP
1001 West Fourth Street
Winston-Salem, NC 27101-2400
Telephone: (336) 607-7300
Facsimile: (336) 734-2651
mferrario@kilpatricktownsend.com
nregna@kilpatricktownsend.com

Peter J. Chassman (SBN 00787233)
Admitted *pro hac vice*
Hallie H. Wimberly (SBN 24106587)
Admitted *pro hac vice*
REED SMITH LLP
811 Main Street, Suite 1700
Houston, TX 77002
Telephone: (713) 469-3800
Facsimile: (713) 469-3899
pchassman@reedsmith.com
hwimberly@reedsmith.com

Attorneys for Defendant Laboratory Corporation of America Holdings

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above document, which was filed under seal, has been served on all counsel of record via email on June 30, 2022.

/s/ Olivia M. Kim
Olivia M. Kim